LESSONS FROM THE RAIN FOREST
EXPERIENCES OF THE PILOT PROGRAM TO CONSERVE
THE AMAZON AND ATLANTIC FORESTS OF BRAZIL

The Amazon Basin

The largest hydrographic basin in the world, the Amazon is the source of 20% of all the fresh water on the planet. The Basin covers some 600 million hectares in nine countries, over half of which are located within Brazil’s national boundaries.

A striking characteristic of the Amazon region is its tremendous biodiversity, which includes an estimated 50,000 species of plants, 3,000 species of fish and over 400 known species of mammals. To date, scientists have classified 467 species of reptiles and 516 species of amphibians. Nearly 2,000 known species of birds and the majority of the world’s primates are endemic to Amazonia. An estimated 20 million people currently live in the Brazilian Amazon, the majority in urban areas. The region is home to over 170 indigenous groups with distinct cultures, in various levels of contact with the outside world. A variety of social and economic groups are also part of the rural landscape, including rubber-tappers, Brazil nut gatherers, riverine populations, migrant settlers, placer miners, loggers and cattle ranchers.

In the 1960s and 1970s, a rapid process of frontier expansion was initiated in the Brazilian Amazon, associated with cattle ranching, commercial logging, and creation of rural settlements, mining, road construction and hydroelectric projects. Over a period of four decades, approximately 78 million hectares in the Brazilian Amazon (15.3% of the total area) were cleared. About 70% of this deforestation has occurred along the southern flanks of the Amazon, in the states of Pará, Mato Grosso and Rondônia.

The Atlantic Rain Forest

The Atlantic Rain Forest or “Mata Atlântica”, located along the coast and inland portions of northeastern and southern Brazil, is one of the most biodiverse of all rain forests on Earth, but also one of the most threatened. As the result of historical processes of occupation and economic exploitation, such as the expansion of sugar cane plantations that begin in the seventeenth century, only an estimated 7.8% of the original forested area of some 100 million hectares remains intact.

The coastal region of the Mata Atlântica is where the majority of Brazil’s population, urban centers and economic activity are concentrated. One hundred and twenty million people live in the area of the Atlantic Rain Forest dominion. This biome helps to regulate the climate, temperature, humidity, and rainfall that affects 70% of Brazil’s population.

In Brazil, it is useful to distinguish between the “Legal Amazon” and the Amazon forest itself. The Amazon forest covers some 4.1 million square kilometers or 48% of the national territory. The “Legal Amazon”, a geopolitical region defined by the federal government in the 1960s to administer fiscal incentives and other regional development policies, encompasses 5 million square kilometers or 58% of the country’s total area. It encompasses all or part of nine Brazilian states (Acre, Amapá, Amazonas, western Maranhão, Mato Grosso, Pará, Rondônia, Roraima and Tocantins) and includes extensive areas of savannah vegetation and transitional forests to the south.

Efforts aimed at reducing deforestation rates in the Amazon are an integral part of strategies to promote environmental protection, ensure the sustainable use of natural resources and improve living conditions among local populations. The Pilot Program to Conserve the Brazilian Rain Forest plays a significant role in meeting this important challenge.
hectare in the southern part of Bahia State. Overall, the biome contains 1.6 million species, with 50% of the 20,000 plant species being endemic. The fauna of the Mata Atlântica includes such endangered species as the golden lion tamarin (*Leontopithecus rosalia*), spotted jaguar (*Panthera onca*) and the small blue macaw (*Cyanopsittae spix*). While the Pilot Program was originally oriented solely towards the Brazilian Amazon, the Atlantic Rain Forest has increasingly become a focus of program activities.

**About the Pilot Program**

The Pilot Program to Conserve the Brazilian Rain Forest is a joint initiative of the government and society of Brazil, in partnership with the international community. It is aimed at developing innovative strategies for the protection and sustainable use of the Amazon and Atlantic coast rain forests and the need to enhance the livelihoods of local populations.

Discussions resulting in the proposal to create the Pilot Program began at the 1990 summit of the “Group of Seven” (G-7) industrialized countries, in the wake of growing international concerns about rapid deforestation in the Amazon basin. In the following year, representatives of the G-7 countries and the European Commission formally approved support for the Program. The agreement signed by the Brazilian Government and donor countries defined that the overall objective of the Program would be to “maximize the environmental benefits of the rain forest in accordance with Brazil’s development goals by implementing a sustainable development methodology that contributes to the steady reduction of deforestation”.

The Government of Brazil formally launched the Pilot Program in 1992, at the United Nations Conference on Environment and Development (Earth Summit) in Rio de Janeiro. The first projects were approved in 1994, with implementation beginning in 1995. The Pilot Program is composed of a large portfolio of subprograms and projects within five major categories or lines of action:

- **Protection and management of conservation units and indigenous lands**, including buffer zones and other interstitial areas, with due attention to support for the sustainable livelihoods of local populations (see Box 1).

- **Experimentation and demonstration** in sustainable production and resource management, involving activities in such areas as agroforestry, forest management and fisheries, with a particular emphasis on community-based initiatives (see Box 2).

- **Institutional Strengthening** to increase the capacity of state and municipal governments to formulate and implement decentralized environmental policies. Support has also been provided for strengthening networks of civil society organizations, as a basis for active participation in the Pilot Program.

- **Support for applied research in science and technology** to better knowledge about the ecology of tropical forests and needs for the sustainable management of these ecosystems, in a manner that contributes to other Program activities.

**Box 1 - An Innovative Approach to the Protection of Indigenous Lands**

Indigenous peoples have long developed elaborate systems of knowledge about the ecology and practical uses of flora and fauna resources as a basis for their livelihood strategies. However, indigenous peoples and other traditional populations have often been portrayed as obstacles to modernization and economic development, especially when powerful interests have competed for access to and use of natural resources.

These misconceptions are becoming the exception in Brazil, with the support of initiatives such as the Integrated Project for the Protection of Indigenous Peoples and Land in the Amazon (PPTAL) and the Extractive Reserves project (RESEX) of the Pilot Program. Through these projects, it has become increasingly apparent that traditional populations are an important part of a mosaic of solutions needed to promote environmental protection and sustainable development in the Amazon and other tropical forest regions.

The PPTAL was formulated in 1994 to improve the conservation of natural resources in indigenous areas and increase the well-being of indigenous people by means of (1) regularization of indigenous lands in the Amazon region and (ii) improving the protection of indigenous lands. Specific objectives also included the promotion of indigenous participation in land regularization and protection activities, improving regularization procedures, and developing appropriate methodologies for environmental assessments of natural resources on indigenous lands.

The results of the project have been impressive, including the demarcation of 59 indigenous territories, covering a total area of 45 million hectares (equivalent to more than 10% of the Amazon forest or an area larger than that of Germany, Netherlands and Switzerland combined). A significant portion of the indigenous lands already demarcated has completed the final steps of being registered and finalized by Presidential Decree.

- **Identification and dissemination of strategic lessons**, with an eye towards influencing public policies, as well as the planning of future program activities. This is an important aspect of all projects within the Pilot Program, and the particular focus of the Monitoring and Analysis Project.

With an initial budget of US$ 280 million, the Pilot Program is funded by grants from the former G-7 countries, the European Union and the Netherlands, complemented by contributions from Brazilian government and civil society organizations.
Box 2 - Extractive Reserves
A model for community-based conservation and development

Rubber tappers and forest dwellers settled in the Amazon at the end of the nineteenth century, attracted by the global demand for rubber. Following the end of the boom and intensifying in the 1960’s and 70’s, the rain forest came under increasing pressure from loggers and cattle ranchers. Forest dwellers, under the leadership of Chico Mendes, opposed the destruction of the forest which represented their only source of income. By the mid-1980s, this movement had grown and expanded to many states in the Amazon, leading to the creation of the National Council of Rubber Tappers in 1985. During this period, the rubber-tappers movement launched the proposal for the creation of Extractive Reserves. With the initial objective of securing access rights for local communities, the Extractive Reserves proposal combined elements of agrarian reform with the idea that conservation units could involve traditional communities in their protection and management.

With the assassination of Chico Mendes in December 1988, problems of social conflict and environmental devastation in the Amazon became the subject of headlines in the Brazilian and international press. Under mounting pressure from public opinion at the national and international levels, the Brazilian government (IBAMA) with the support of the Pilot Program created the first four Extractive Reserves in the Amazon in early 1990.

An initial and critical step was to support IBAMA in resolving land tenure problems within the reserves, which included land expropriations and indemnifications, as a prerequisite for the granting of resource use concessions to local communities. As a basis for the implementation of the reserves, forest dwellers were trained and organized in associations. Other activities aimed at:

- Preparation of resource utilization plans. Using participatory methods, local communities prepared plans for the reserves, a legal requirement for the formal concession of use rights to local associations. These plans were then submitted to IBAMA for formal approval.
- Improving inhabitants subsistence/livelihoods and income generating activities, including the commercialization of traditionally extracted products such as rubber and nuts, support for new commercial forest product initiatives such as crafts and vegetable leather, and feasibility studies of new alternatives such as ecotourism.
- Environmental monitoring and enforcement tasks were carried out by IBAMA and local communities trained to monitor reserve territories and prevent illegal encroachments associated with land speculation, poaching, commercial fishing, etc.
- Improving basic infrastructure, such as schools, transport facilities, radios and health posts. These investments were carried out in close cooperation with local communities, which provided counterpart funding and labor to guarantee ownership.

After six years of testing and monitoring the project’s activities and results, it is clear that the Extractive Reserves model is feasible and replicable in the Amazon, in other regions of Brazil and other countries where similar conditions exist. Monitoring data on the maintenance of forest cover and biodiversity indicates that the reserves are fulfilling their environmental conservation functions. The annual costs of social and economic development as well as maintenance of the reserves are less than US$1 per hectare. This low cost could only be achieved through direct cooperation with local populations. Though still modest, average monthly incomes in the reserves have increased and are superior to those in nearby Amazon towns and peri-urban areas. Many former inhabitants of reserves that migrated to cities have recently returned to their original homes.

The positive steps taken in implementing the first four Extractive Reserves in the Brazilian Amazon, involving the management and protection of some 2.1 million hectares of rain forest and socio-economic benefits to an estimated 2,900 families, have helped mobilize support for the creation of additional reserves. Since the beginning of the project, 17 other Extractive Reserves have been created and 20 more are on the drawing board.

Towards a Second Phase of the Pilot Program

A second phase of the Pilot Program, scheduled to begin in 2003, is currently under preparation. Based on discussions that have evolved since 1999, there is broad consensus among participants that the next phase of the program will focus on consolidation of innovative strategies and “mainstreaming” lessons learned to influence public policies for the sustainable development of the Amazon and Atlantic rain forests.

A Participants’ Meeting in June 2001 defined the objectives for the second phase of the Pilot Program:

- Generating, validating and disseminating knowledge within Brazil and the Amazon and Atlantic Forest regions
- Catalyzing the adjustment of policies and mobilizing political support for their adoption and their effective implementation
Promoting and selectively supporting the mainstreaming and scaling-up of successful experiences and models

Strengthening capacity in public, private and civil society institutions to implement such policies and apply new knowledge

Since December 2001, a series of seminars and workshops has advanced planning for the second phase of the Pilot Program. One of the innovations of this process has been the creation of working groups around strategic lines of action (conservation units and indigenous lands; sustainable production and business; environmental monitoring and control; local and regional development; science and technology). With broad participation of stakeholders from government agencies, civil society organizations and the private sector, the working groups are responsible for identifying priority actions for the second phase of the Pilot Program, while incorporating lessons learned from the first phase. This includes an analysis of actions that may be implemented by existing projects in the Pilot Program’s portfolio, as well as needs for the creation of new projects.

Challenges Going Forward

A major challenge for the second phase of the Pilot Program concerns the need for vigorous efforts to streamline cumbersome bureaucratic procedures that often affect the quality of project implementation. In this regard, further steps are needed to enable more flexible approaches to the preparation and implementation of projects, suited to the ‘pilot’ nature of the Program. Such initiatives can build upon positive examples of decentralized and simplified management strategies found in many Pilot Programs projects.

Another challenge for the second phase of the Pilot Program is to strengthen the monitoring and evaluation systems of projects, especially in terms of their ability to analyze impacts and to identify strategic lessons. Such a qualitative approach to monitoring and evaluation contrasts with a tendency to view these instruments of project management as mere bureaucratic exercises undertaken in response to external demands for administrative and financial control. Clearly, such measures are best initiated early in the process of project design, to address questions related to the allocation of financial and human resources to monitoring systems, and the organization of baseline data.

A further challenge for the second phase of the program will be to promote greater exchange of experiences and lessons learned with other countries in the Amazon basin, as well as other regions of the world where the protection and sustainable use of tropical forests is an urgent necessity.

Finally, a key issue for the second phase of the Pilot Program is to strengthen partnerships with existing donor countries, while exploring additional possibilities for financial and technical cooperation.

Sources

Text drawn from: “Lessons from the Rain Forest: Experiences of the Pilot Program to Conserve the Amazon and Atlantic Forests of Brazil” Ministry of the Environment (MMA) - Brazil, Secretariat for Coordination of the Amazon (SCA/MMA) Pilot Program to Conserve the Brazilian Rain Forest, Monitoring and Analysis Project (AMA) and The World Bank, Brazil Rainforest Unit, August 2002

Useful Links

Learn more about the Brazil Rain Forest Pilot Program at http://www.worldbank.org/rfpp/

Obtain the “Success Stories” series at http://www.worldbank.org/rfpp/docs/success_e.htm

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